

## VU Research Portal

### What do Young Children Know About Sex? Research on the Sexual Knowledge of Children Between the Ages of 2 and 6 Years

Brilleslijper-Kater, S.N.; Baartman, H.E.M.

***published in***

Child Abuse Review  
2000

***DOI (link to publisher)***

[10.1002/1099-0852\(200005/06\)9:3<166::aid-car588>3.0.co;2-3](https://doi.org/10.1002/1099-0852(200005/06)9:3<166::aid-car588>3.0.co;2-3)

***document version***

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

***citation for published version (APA)***

Brilleslijper-Kater, S. N., & Baartman, H. E. M. (2000). What do Young Children Know About Sex? Research on the Sexual Knowledge of Children Between the Ages of 2 and 6 Years. *Child Abuse Review*, 9(3), 166-182. [https://doi.org/10.1002/1099-0852\(200005/06\)9:3<166::aid-car588>3.0.co;2-3](https://doi.org/10.1002/1099-0852(200005/06)9:3<166::aid-car588>3.0.co;2-3)

**General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

**Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

---

**Sonja N. Brilleslijper-Kater\***

**Herman E. M. Baartman**

Department of Education  
Vrije Universiteit Amsterdam,  
The Netherlands

---

# What do Young Children Know About Sex? Research on the Sexual Knowledge of Children Between the Ages of 2 and 6 Years

We investigated the sexual knowledge of 63 Dutch children in the age range 2–6 years. Boys and girls were equally represented in the sample. The children had an average, or above-average IQ and none of them had any experience of sexual abuse. It was found that young children have a very limited knowledge of sexuality. They only possess some basic knowledge of genital differences, gender identity, sexual body parts and (non-sexual) functions of the genitals. Knowledge of pregnancy and birth, reproduction and adult sexual behaviour was found to be very limited and decreased in the order presented here. Non-sexually abused children appear to interpret situations that show physical intimacy between adults and children in terms of their own experiences. None of the children talked about sexual activities. Older children generally knew more than younger ones. No significant differences in knowledge between boys and girls were found. Copyright © 2000 John Wiley & Sons, Ltd.

KEY WORDS: young children; sexual knowledge; diagnosis; sexual abuse

***‘Clinicians and researchers often assume certain sexual knowledge of children to be deviant’***

Until now little was known about young children’s sexual knowledge. In particular, young children’s *knowledge* about sexuality has been very rarely explored. Nevertheless, clinicians and researchers often assume certain sexual knowledge of children to be deviant according to their age (e.g. Bentovim and Vizard, 1988; Gordon, Schroeder and Abrams,

\* Correspondence to: S.N. Brilleslijper-Kater, Vrije Universiteit, Van der Boerhorststraat 1, 1081 BT Amsterdam, The Netherlands. Tel: +31-20-4448893. Fax: +31-20-4448745. e-mail: sn.brilleslijper@psy.vu.nl

1990a,b; Lamers-Winkelmann, 1992, 1995; Volbert, 1992). The suggestion that children may exhibit precocious sexual behaviour and knowledge as a result of sexual abuse is commonly heard (e.g. Beitchman, Zucker, Hood, daCosta and Akman, 1991; Browne and Finkelhor, 1986; Conte, Sorenson, Fogarty and Dalla Rosa, 1991).

The reason that so few investigations have been carried out on the sexual knowledge of young children can be attributed to the conceptualization of sexuality by adults, who often associate sexuality with sexual intercourse only. Given the social, moral and relational complexity of the subject, there is a tendency to avoid this topic with (young) children. In addition, feelings of reluctance and embarrassment may be due to the fact that it is not considered suitable to give this information to 'the innocent young child'. One can assume, however, that prior to being able to judge age-inappropriate knowledge, a deeper understanding of the age-appropriate knowledge of (young) children is necessary, in addition to filling the gaps in the existing literature. Research can be useful in producing age-appropriate educational programmes concerning sexuality, diagnosis of sexual abuse through recognition of age-inappropriate sexual knowledge and the development of sexual abuse prevention programmes.

Mainly because of the connection made at present between sexual abuse and age-inappropriate sexual behaviour of young children, in recent years some attention has been paid to research on the sexual behaviour of young children, for example by means of anatomically detailed dolls (e.g. Beitchman *et al.*, 1991; Johnson and Friend, 1995; Boat and Everson, 1994; Everson and Boat, 1990; Friedrich *et al.*, 1991, 1992, 1996; Geddie, Dawson and Weunsch, 1998; Gordon and Schroeder, 1995; Kendall-Tackett, Williams and Finkelhor, 1993; Van der Zanden, 1992). Most of the literature on young children's sexual behaviour focuses on the question of whether auto-erotic sexual behaviour is common for young children (e.g. Newson and Newson, 1968; Oostveen, Meulmeester and Cohen-Kettenis, 1994). According to, among others, Friedrich, Grambsch, Broughton, Kuiper and Beilke (1991), children, especially during the pre-school years, engage in a wide variety of overt sexual behaviours. These behaviours are commonly seen as normal exploratory behaviours and biological curiosity, which belong to the developmental stage of pre-school children. In this respect, since young children are assumed to have no sexual knowledge, they are presumed to have no sexual imagery, and their sexual activities are not comparable to adult or older children's sexual behaviour, such as masturbation (e.g. Elias and Gebhart,

***'The  
conceptualization  
of sexuality by  
adults'***

***'Children engage  
in a wide variety of  
overt sexual  
behaviours'***

***‘There is still little research on young children’s knowledge of sexuality’***

***‘The purpose of our study was to determine the age-appropriate sexual knowledge of young children’***

1969; Goldman and Goldman, 1982; Martinson, 1981; Oostveen *et al.*, 1994; Spiecker and Steutel, 1997).

Although there has been an increasing amount of research on child sexual behaviour, there is still little research on young children’s knowledge of sexuality. Most of the existing literature on this topic dates back to the first half of the twentieth century. The literature of that period focuses primarily on theoretical frames, such as the psycho analytical theory of Freud and the cognitive theory of Piaget. Recent literature (since approximately 1966) focuses primarily on two specific topics: knowledge of genital differences and the development of gender identity (e.g. Bern, 1989) and children’s understanding of the origin of babies (e.g. Bernstein and Cowan, 1975; Moore and Kendall, 1971). Some studies have focused on both of these topics (e.g. Goldman and Goldman, 1982, 1988; Gordon *et al.*, 1990a; Kreitler and Kreitler, 1966; Volbert, 1992). Related to the topic of young children’s knowledge of sexuality, other investigations have, among other subjects, examined sexuality education (e.g. Finkelhor, 1984; Gebhart, 1977; Goldman and Goldman, 1988; Gordon and Snyder, 1983; Klein and Gordon, 1991; Röling, 1994; Volbert, 1992). For a more complete (Dutch) view on the literature and our study, we refer to Brilleslijper-Kater (1995) and Brilleslijper-Kater and Baartman (1997). The purpose of our study was to determine the age-appropriate sexual knowledge of young children aged 2–7. By this, we hoped to aim to gain insight into what young children know about sexuality.

## **Method**

### *Subjects*

We recruited a sample of 63 Dutch children (32 girls and 31 boys) between the ages of 2 and 6 years. Table 1 shows the distribution of the children by age and sex.

The children in our research had an average or above-average IQ. This was measured by an instrument to test the

**Table 1.** Distribution of the children by age and sex

	Age/sex					Total
	2	3	4	5	6	
Boys	3	5	7	6	10	31
Girls	5	8	5	8	6	32
Total	8	13	12	14	16	63

cognitive development of children up to 7 years of age called in Dutch the '*Gross vormbord*' (Van der Berg, Pennings and Span, 1985). Both reliability and validity of the '*Gross vormbord*' are judged to be 'satisfactory' (Kievit, de Wit and Tak, 1988). To control effects of language, the Peabody Picture Vocabulary Test—revised (Dunn and Dunn, 1981) was used. This is a pictorial test of receptive vocabulary. Although it is not a comprehensive intelligence test, it does measure vocabulary, which is closely associated with future success in school (compare Mian, Marton and LeBaron, 1996). All the children scored higher than average. Furthermore, given the fact that there were no allegations of sexual abuse and all the parents stated that the children had never been confronted with sexual abuse, we took the line that none of the children had any previous experiences of sexual abuse. Thus, the results of the study were unlikely to be influenced by previous experience of a sexual relationship with an adult and/or cognitive shortcomings. All of the children attended nursery or primary school.

The finding of a representative population, however, did not appear easy (compare Bern, 1989; Geddie *et al.*, 1998; Gordon *et al.*, 1990a; Volbert, 1992). Apart from practical reasons for non-participation (e.g. lack of space or time), the subject of the research undoubtedly contributed to the reluctance of many of the nurseries and schools. The first step in our effort to find a representative population was writing a letter to all of the nurseries and schools in Amsterdam and its suburbs. In this letter, the purpose and methods of the study were briefly explained and the institutions were asked to participate. We also offered the institutions the opportunity to invite the main researcher to come to the nursery or school for a personal explanation about the study and to display the materials which would be used in the research. Approximately 2 weeks after the letters were sent, we phoned all the institutions we had written to. This resulted in an invitation from five institutions, where the researcher first had a meeting with the headteacher(s) and in later appointments informed the team(s) and the board of parents about the 'hows' and 'whys' of the research. It was ensured that the participation of the children could only take place after informed consent from their parents. This resulted in the participation of one nursery, one school and one nursery with after-school care. The next step was to gain parental participation. Parents were invited to attend meetings to obtain information on the research, and were promised an invitation to a feedback meeting where they could view the videotape of their own child. This undertaking secured par-

***'None of the children had any previous experiences of sexual abuse'***

***'Participation of the children could only take place after informed consent from their parents'***

***‘15 pictures were shown to measure sexual knowledge’***

***‘All the interviews were recorded on videotape’***

ents’ agreement to participate. The majority of the parents who agreed to the study appeared to be highly educated, were native Dutch and were not religious. The fact that within the institutions a lot of the children were not from native Dutch backgrounds and had parents who were not as well educated was a notable finding.

### ***Procedure and Materials***

Each child was interviewed individually for about 30 minutes during nursery or school hours. During this interview, 15 pictures were shown to measure sexual knowledge. The pictures used were originally developed for a study by Volbert and Homburg (1996). The reason we chose this particular way of interviewing is that young children respond better to concrete stimuli (see also Gordon and Schroeder, 1995).

For each picture, the children were first asked an open-ended question (e.g. What does this picture show?) followed by more structured questions if necessary (e.g. What are the people doing?) The people in the pictures were meant to represent familiar home situations for the children, with the adults looking about 25–40 years of age and the children looking like pre-schoolers.

After the first two ‘warm-up’ pictures (a man, a woman and a child eating together and two children being bathed by two adults), four pictures (a clothed and naked boy and girl and a clothed and naked man and woman) were shown to assess knowledge of genital differences, gender identity and body parts and functions. On the subjects of pregnancy, birth and reproduction, pictures showed a pregnant woman and a woman giving birth. Knowledge of adult sexual behaviour was assessed using pictures of a male and female kissing and a male and female having sexual intercourse. The last five pictures were used to assess knowledge of differences between physical intimacy and sexual interactions (nude girl touching the penis of a boy, doctor examining a nude child, female with arms around a nude boy touching his penis, male hanging over a girl in bed and a crying boy in the arms of a female in bed).

All the interviews were recorded on videotape for later scoring and analysis. Regarding the method of scoring, we (the interviewer and an independent researcher with a Masters degree in paedagogics who was an expert in interviewing children in cases of sexual abuse) examined the content of the responses by differentiating between several kinds of answers. This was done for every item by awarding a special mark for different kinds of answers. The interrater reliability was measured by Cohen’s kappa. The scores overall appeared to



be quite reliable, ranging from 0.64 to 1.00, with an average of 0.900.

In addition to the child interviews, the parents were given a questionnaire including queries about the sex education they had provided, questions their children had asked about sexuality, what facts parents thought their children knew and how difficult they thought it was to talk with their children about sexuality. The second section included questions about sexual behaviour their children had displayed and the sexual experiences of their children. The last part was a rating scale covering parental attitudes towards sexuality and young children (e.g. 'Parents should not be nude in the presence of their children' or 'Sexual play among young children is common').

## Results

In this section we will first pay attention to parental sex education and the general sexual knowledge of young children. Subsequently, we will discuss five areas of knowledge: gender identity, the birth process, reproduction, adult sexual behaviour and differences between physical intimacy and sexual interactions. We have decided to describe the topics in this particular order because the order in which children normally obtain their knowledge parallels the sequence of the first four areas. Children's knowledge of differences between physical intimacy and sexual interactions is discussed last as, in contrast to the other topics, no references could be obtained from the literature on this area. The results concerning the topic of parental sex education and the general sexual knowledge of young children are obtained from the parent questionnaire. The results of the 'knowledge topics' are obtained from the child interviews. We have analysed differences in knowledge between 2-, 3- and 4-year-old children on the one hand and 5- 6-year-olds on the other.

### *Parental Sex Education and Children's Questions*

Almost all of the parents thought it was very important to provide sex education to their children. However, they did not discuss sex with their children without a reason. Approximately half of the parents (52%) started sex education only in response to their child's questions. Other parents (13%) talked to their children about sex when relevant, such as the occasion of a birth of a baby in the family. Eleven per cent of the parents had started in both settings. The majority of the parents talked with their children about the topics of genital

***'The parents were given a questionnaire including queries about the sex education'***

***'They did not discuss sex with their children without a reason'***

***‘Sexual abuse of children, sexual intercourse and sexuality appeared to be difficult topics’***

differences (95%), pregnancy (91%) and birth (84%), which they found easy to discuss. Sexual abuse of children, sexual intercourse and sexuality (not including reproduction) appeared to be difficult topics, and were therefore not discussed by most parents (respectively 91%, 83% and 71%). On the whole, most children themselves started to ask about genital differences (86%, as early as 2 years), pregnancy (76%, around 2.5–3 years) and birth (70%, at approximately age 3). Children usually had not asked about sexual intercourse (86%) or sexuality (not including reproduction, 83%). The few children who did ask about these topics were older than 4 years at the time. Only three children (5%) ever asked about the sexual abuse of children. Remarkably, they were the 3- and 4-year-olds. All these results point to the fact that topics like genital differences, pregnancy and birth occur in almost every child’s life, whereas young children normally are not confronted with sexual abuse, sexual intercourse and sexuality (excluding reproduction). Hence, young children simply do not ask about the last three topics, and they are not therefore discussed by parents and children.

### *Knowledge of Gender Identity*

#### *Genital differences*

Even 2- and 3-year-old children are aware of the fact that there are two different sexes. Over a third of the children (79%) spontaneously identified the boy and the girl in the pictures of the clothed and naked boy and girl. When asked for an explanation for the differences in the sexes, children tend to say what they can see. For the picture of the clothed boy and girl, they mostly use a cultural cue (65%), e.g. ‘The girl has got longer hair than the boy’. For the picture with the naked boy and girl, they usually use a genital cue (66%).

#### *Gender identity*

With the exception of two 2-year-olds, all children in our study are well aware of their own gender (97%). Moreover, they know that they possessed this gender as a baby and that they will keep this gender as an adult (both 90%). Regarding the question about what their gender will be when they are grown-ups, most girls respond by saying something like: ‘Then I’ll be a mother’. For boys, the answer: ‘Then I’ll be a big boy’ is often heard. The fact that children are aware of their gender does not mean that they can use this knowledge. Over a third of the children (37%) did not know how to tell if they were a boy or a girl. Those who gave an answer mostly gave a cultural cue (one-third of the subjects 32%), e.g. (a 5-

***‘Over a third of the children did not know how to tell if they were a boy or a girl’***



year-old girl) 'I have a ponytail, haven't I?' or (a 5-year-old boy) 'I'm a very good soccer player!'. Of all children, one-fifth identified her/his gender on the basis of genitalia. Six children (10%) said they knew their gender because someone (one of the parents, usually the mother) had told them.

### *Sexual body parts and functions*

For the picture of the clothed man and woman, the researcher pointed at the mouth, eyes, ears, hands and legs, asking two questions: 'What is this and what is it for/ Why do we have it?'. This was followed by the picture of the naked man and woman, asking the same two questions for the belly, breasts, penis and vagina. In view of the fact that young children especially had their own names for the sexual body parts, in the scoring it was considered correct if the child ascribed any (reasonably appropriate) name to them. This led to the result that most children in our research knew the sexual body parts (breasts 94%, penis 95%, vagina 78%). It is remarkable that the names children used for the vagina were much more numerous than the names they used for the penis.

Regarding the functions of the sexual body parts, it appeared that children do not think of a sexual function. Insofar as children gave a function for the breasts (37% did not), they talked about a nursing one. For the penis, most children gave an elimination function (84%). Only the answer of one 6-year-old girl showed some kind of biological curiosity or possible sexual function: 'One can feel it, (name of male of unknown age) lets me do that when we're together'. Children mostly gave elimination functions for the vagina as well (68%). Unlike the penis, some of them think that one can have stools with the vagina too. Four children (6%, 5 and 6 years of age) knew the birth function, e.g. (a 5-year-old girl): 'There are three holes, one to pee, one to poop and one is for the baby to get out'. One 5- and one 6-year-old (3%) talked about a 'sexual function'. The 5-year-old girl said: 'One can stroke it'.

***'Regarding the sexual body parts, it appeared that children do not think of a sexual function'***

### *Knowledge About the Birth Process*

#### *The origin of babies*

To the question of where babies come from, a large group of children (44%) gave an (observable) answer, such as: 'Babies come out of the belly'. Others thought of the baby as waiting in the seed or the egg until it could be born, e.g. a 4-year-old girl (interviewer's questions shown in brackets):

***‘None of the children told the correct story of reproduction’***

***‘The majority of the children could not answer a question about how the baby gets into the mother’s belly’***

‘“Babies come from seeds” (How?) “It is here inside the penis of the man” (And where does the baby come from?) “Not from the man, I don’t know, I’ve just heard this” (Do you know how the seed gets into the mother?) “No” (Is the seed already a baby or does it later become a baby?) “No, inside the seed is a baby and then it starts to grow, I think”.’

A 6-year-old girl said:

‘There is a seed in mother’s belly, that seed becomes an egg, that egg gets bigger and bigger and that becomes a baby’.

Two children (3%) gave an artificial answer, e.g. a 6-year-old boy:

‘They are made by the Lord and then they go into the belly. There they have a bottle and a cord fastened to the navel through which the baby gets air and food. Then it’s born, but it has to be kept very warm’.

Beyond age 4, six children (10%) said something about fertilization (seeds and eggs) or birth. None of the children told the correct story of reproduction.

*Possible exits for the baby*

In general, the children appeared not to be well informed on how the baby comes out of the mother’s belly. The throat, neck and ears were mentioned as possible exits for the baby. When given suggestions of possible exits for the baby like navel, mouth, anus, vagina and opening of the belly, most children appeared to consider none of the suggestions plausible and answered something like: ‘Then I think the belly must be opened!’.

*Place where the baby was previously*

Most children (67%, all of the 2-year-olds) could not answer the question where the baby was before it was inside the mother’s belly. Ten per cent of the children (3-, 4- and 5-year-olds) think the baby has always existed. Around age 4 children start to think ‘the baby simply was not there’. Children of the ages of 5 and 6 think the baby was waiting in the seed or in the egg, e.g. (6-year-old girl): ‘He’s waiting in the seed until the mother gets a fat belly’. None of the children think in a sexual way.

*Knowledge of Reproduction*

*Sexual intercourse as a necessity for conception*

The majority of the children could not answer a question about how the baby gets into the mother’s belly (84%). All

2-, 3- and 4-year-old children (with the exception of the 4-year-old) belonged to this group. Ten per cent of the children (one 4- and five 5- and 6-year-olds) said something concerning fertilization. These children had heard about seeds and eggs, but were not knowledgeable about the real procedure of fertilization, e.g. a 6-year-old girl:

‘“The woman has eggs and the man has seeds and if they are married the mother gets a fat belly” (Where are the eggs?) “In the belly” (And the seeds?) “Also in the belly” (What happens with the eggs and seeds?) “They come together” (How?) “I don’t have a clue”.’

Only 6% of the children (one 5-year-old and three 6-year-olds) related conception to sexual intercourse, e.g. a 6-year-old girl:

‘“Then mummy and daddy have to court” (How do they court?) “They put the penis into the vagina” (And then?) “Then they have a baby”.’

### *Reproduction*

Most children (65%) knew about the necessity of both a man and a woman for conception, but could hardly explain this. Half of the children (48%) did not give any explanation at all. Around the age of 5, some children (11%) said something about the seed and the egg, e.g. a 5-year-old boy:

‘“Because it has to be made with a seed and an egg. The seed asks the egg ‘Do you want to make a baby?’” (And why are both mummy and daddy necessary?) “Because the seed belongs to daddy and mummy has got an egg”.’

Only the 5-year-old boy talked in this context about sexual intercourse (‘penis in the vagina’). Furthermore, the fact that most children knew about the necessity of both a man and a woman for conception did not mean they knew what the father and mother must do in order to have a baby. When the children answered the question, the answer was not a sexual one. With respect to the mother, children usually said she has to wait until her belly gets fat, eat, buy a special drink or swallow a seed or an egg. A common answer heard regarding the father was that he simply did not do anything, e.g. ‘He has bad luck’ and ‘That’s not possible for daddies’. Some children (10%) gave an answer which was based on social aspects, such as: ‘Daddy must cook’ and ‘Daddy must hold mummy when she’s in pain’.

***‘Only 6% of the children related conception to sexual intercourse’***

***‘A common answer heard regarding the father was that he simply did not do anything’***

***'In some of the cases, children talked about being in love or marriage'***

***'They had no knowledge of sexual intercourse'***

### ***Knowledge of Adult Sexual Behaviour***

Regarding the picture of the male and female kissing, in general children appeared to view it in terms of their own experiences. A typical answer was the following from a 5-year-old-girl:

'“They kiss each other” (Why?) “Because they like each other” (Are there more things people do when they like each other?) “Yes, they go dance and play together”.'

In some of the cases, children talked about being in love or marriage. Only one 5-year-old boy gave an answer including a description of sexual behaviour:

'“Male and female are making love” (How do they make love?) “They put the penis in the vagina” (Is that what the man and woman are doing in this picture?) “Here they are kissing”.'

Over a third of the children (38%, mostly 2-, 3- and 4-year-olds) did not understand the picture of the male and female having sexual intercourse lying down and turned the picture to show the couple in a standing position, telling the interviewer that the way the picture was shown was wrong. Here again, the descriptions given by the children were mostly based on their own experiences concerning playing, dancing, sleeping and talking. Insofar as children gave an answer which included a description of sexual behaviour (11%), they appeared to have heard something but were unable to really apprehend this, e.g. a 6-year-old boy:

'“They are fucking” (How do you know?) “Because they are naked” (Do you know what ‘fucking’ is?) “No” (But you do know that you have to be naked in order to fuck?) “Yes” (And why do they fuck?) “No idea”.'

A 6-year-old girl tells:

'“They are laying on top of each other, but I don't know what they are doing. Oh, perhaps that's for the seed and egg to come together” (How do they come together?) “That I don't know”.'

The conclusion from these two pictures is that, overall, children knew about physical intimacy between adults such as kissing and cuddling, but they had no knowledge of (the how and why of) sexual intercourse. This conclusion seems to reflect what occurs in children's lives. According to the answers on the questionnaire, most children are being confronted with physical intimacy between their parents but not with sexual intercourse (both 94%).

### *Knowledge Concerning Differences Between Physical Intimacy and Sexual Interactions*

Despite the fact that young children's knowledge of differences between physical intimacy and sexual interactions does not strictly form a part of knowledge of sexuality, we still wanted to assess whether a young child is able to tell the difference between 'normal' intimate relationships and sexual interactions. For this reason, we were also interested in this topic as being part of those included in the sexual knowledge of young children. For the picture assessing interactions between children in general, the answers were simply a description of the situation shown (a nude girl touching the penis of a boy). Some children talked about helping one another to urinate (like a 4-year-old girl: 'She shows him how to pee') or laughing at each other because of the genitalia (like a 5-year-old boy: 'The girl is laughing because she thinks he has a funny penis').

Regarding the four pictures assessing interactions between adults and children, the children in our research (assuming they had never been confronted with sexual abuse) appeared to interpret them in terms of their own experiences (e.g. a father saying goodnight to his daughter). None of the children gave a description of sexual abuse or any kind of sexual interaction.

### **Conclusion and Discussion**

The outcome of this study suggests that young children have very little sexual knowledge (compare Gordon *et al.*, 1990a; Volbert, 1992). They only possess a certain basic knowledge of genital differences, gender identity, sexual body parts and (non-sexual) functions of the genitals. Knowledge of pregnancy, birth, reproduction and adult sexual behaviour is very limited and decreases in the order listed. Only 5- and 6-year-olds can tell us something about these areas, but their knowledge is still very limited. Younger children generally know less than older ones. Two-year-olds know less than each of the other age groups in all assessed areas of sexuality. As well as assuming that 2-year-olds really have less knowledge, verbal limitations should also be taken into account. These results are in agreement with other theoretical findings on the sexual development of children, including the developmental categorization of children's understanding of reproduction by Goldman and Goldman (1982, 1988).

***'Regarding pictures assessing interactions between adults and children, the children appeared to interpret them in terms of their own experiences'***

***'They simply do not think about topics that do not occur in their lives'***

***'Detailed sexual knowledge in young children should at least be regarded as a warning signal'***

Although parents nowadays consider it important to talk about sexuality even with young children, they still find it difficult to actually do so. Topics with which children are normally confronted, such as genital differences, pregnancy and birth, are easy for parents to discuss, whereas topics which are normally remote from children, such as sexual intercourse, sexual abuse and sexuality (not including reproduction), are considered to be difficult. This is for the most part attributable to the fact that children themselves appear to ask about things they notice which lead to curiosity, while they simply do not think about topics that do not occur in their lives. This also fits in with children's knowledge of differences between physical intimacy and sexual interactions. Children who have never been confronted with sexual abuse interpret daily intimate interactions between adults and children in terms of their own ('innocent') daily intimate sexual action experiences or curiosity and do not use sexual terms (compare Elias and Gebhart, 1969; Goldman and Goldman, 1982; Martinson, 1981; Oostveen *et al.*, 1994; Spiecker and Steutel, 1997).

When comparing all the data presented in this article with statements of alleged sexually abused young children, who often appear to describe sexual interactions in a very vivid way, one can conclude that detailed sexual knowledge in young children should at least be regarded as a warning signal (compare Volbert, 1992). Enlarging the group of non-abused children and comparing the results with those of abused children will enable us to diagnose age-inappropriate and hence deviant sexual knowledge.

For obvious reasons, a systematic study of this topic is difficult. One of the greatest drawbacks is the fact that one cannot control whether or not children tell what they actually know. On the one hand, we may expect that children tell interviewers less than they know. But, on the other hand, the research interview is in many ways comparable to interview situations such as in police and court contexts, in which children also have to verbalize sexual interactions in the presence of unknown adults. Another drawback is that we were unable to obtain a representative population and had to deal with what we could get. The parents who gave permission to include their children in our study appeared to be more educated, were not religious and were mostly native Dutch. Thus, it may be possible that the results do not reflect the average (Dutch) population.

Theoretically, of course, one must acknowledge that in a larger sample there may be a grey area represented by children who have not been sexually abused but who do have an



inappropriate source of detailed sexual knowledge; for example because they found some pornographic magazines, watched a pornographic video or 'accidentally' witnessed sexual intercourse. Although these examples can be labelled as undesirable experiences for young children, they are not abusive. The expectation would then be that these children would have certain age-inappropriate sexual knowledge. This study only considered 63 children, which might be large enough to identify such a grey group, but no such grey area was evident in the results. According to Lamers-Winkelmann (1995), the transformation of those aspects that children have seen to their own experiences demands a cognitive operation beyond the capabilities of such young children.

In order to handle cases of young child sexual abuse appropriately, more work in this type of research is essential. In addition to filling the gap in the existing literature on the kind of knowledge of sexuality which can be seen as age-inappropriate, a deeper understanding of what is age-appropriate is required. In this respect, it is very important to compare the knowledge of children who have been sexually abused with that of non-abused children.

## Acknowledgements

The authors wish to thank Ben Spiecker and Francien Lamers-Winkelmann for their contributions to this article. Also Pat Hancock for her help in preparing the paper for publication.

## References

- Beitchman JH, Zucker KJ, Hood JE, daCosta GA, Akman D. 1991. A review of the short-term effects of child sexual abuse. *Child Abuse and Neglect*, **15**, 537–556.
- Bem SL. 1989. Genital knowledge and gender constancy in pre-school children. *Child Development*, **46**, 77–91.
- Bentovim A, Vizard E. 1988. In A. Bentovim, A. Elton, J. Hildebrand, M. Tranter and E. Vizard, (Eds), *Child Sexual Abuse Within the Family: Assessment and Treatment*. Hartnolls: Bodmin.
- Bernstein AC, Cowan PA. 1975. Children's concepts of how people get babies. *Child Development*, **46**, 77–91.
- Boat BW, Everson MD. 1994. Exploration of anatomical dolls by nonreferred preschool-aged children. Comparisons by age,

***'It is very important to compare the knowledge of children who have been sexually abused with that of non-abused children'***

- gender, race, and socioeconomic status. *Child Abuse and Neglect*, **18**, 139–153.
- Brilleslijper-Kater SN. 1995. Over bloemetjes en bijtjes: een onderzoek naar de kennis van seksualiteit bij kinderen van 2 tot en met 6 jaar. (About the flowers and the bees: research on the knowledge of sexuality of children between the ages 2 and 7 years). Master's thesis, Free University of Amsterdam, The Netherlands.
- Brilleslijper-Kater SN, Baartman HEM. 1997. Over bloemetjes en bijtjes: wat weten kinderen van 2 tot en met 6 jaar over seksualiteit? (About the flowers and the bees: what do young children between the ages of 2 and 7 years know about sexuality?). *Tijdschrift voor seksuologie*, **21**, 65–73.
- Browne A, Finkelhor D. 1986. Impact of child sexual abuse: a review of the research. *Psychological Bulletin*, **99**, 66–77.
- Conte JR, Sorenson E, Fogarty L, Dalla Rosa J. 1991. Evaluating children's reports of sexual abuse: results from a survey of professionals. *American Journal of Orthopsychiatry*, **61**, 428–437.
- Dunn L, Dunn L. 1981. *Peabody Picture Vocabulary Test—Revised*. American Guidance Service: Circle Pines, MN.
- Elias J, Gebhart P. 1969. Sexuality and sexual learning in childhood. *Phi Delta Kappan*, **50**, 401–405.
- Everson MD, Boat BW. 1990. Sexualized doll play among young children: implications for the use of anatomical dolls in sexual abuse evaluations. *American Academy of Child and Adolescent Psychiatry*, **29**, 736–742.
- Finkelhor D. 1984. What parents tell their children about sexual abuse. In D. Finkelhor (Ed.), *Child Sexual Abuse: New Theory and Research*. Free Press: New York, pp. 134–149.
- Friedrich WN, Grambsch P, Broughton D, Kuiper J, Beilke RL. 1991. Normative sexual behaviour in children. *Pediatrics*, **88**, 456–464.
- Friedrich WN, Grambsch P, Damon L, Hewitt SK, Koverola C, Lang R, Wolfe V, Broughton D. 1992. The Child Sexual Behaviour Inventory: normative and clinical comparisons. *Psychological Assessment*, **4**, 303–311.
- Friedrich WN, Berliner L, Butler J, Cohen J, Damon L, Shafram C. 1996. Measurement and assessment tools: child sexual behaviour: an update with the CBSI-3. *The APSAC Advisor*, **9**, 13–14.
- Gebhart PH. 1977. The acquisition of basic sex information. *The Journal of Sex Research*, **13**, 148–169.
- Geddie L, Dawson B, Weunsch K. 1998. Socioeconomic status and ethnic differences in pre-schoolers' interactions with anatomically detailed dolls. *Child Maltreatment*, **3**, 43–52.
- Goldman RJ, Goldman JDG. 1982. *Children's Sexual Thinking*. Routledge and Kegan Paul: London.
- Goldman R, Goldman J. 1988. *Show Me Yours: What Children Think About Sex*. Penguin: London.
- Gordon BN, Schroeder CS. 1995. *Sexuality: A Developmental Approach to Problems*. Plenum Press: New York.
- Gordon BN, Schroeder CS, Abrams JM. 1990a. Age and social-class differences in children's knowledge of sexuality. *Journal of Clinical Child Psychology*, **19**, 33–43.
- Gordon BN, Schroeder CS, Abrams JM. 1990b. Children's knowl-

- edge of sexuality: a comparison of sexually abused and non-abused children. *American Journal of Orthopsychiatry*, **60**, 250–257.
- Gordon S, Snyder SV. 1983. Sex education. In C.E. Walker, and M.C. Roberts (Eds), *Handbook of Clinical Child Psychology*. Wiley: New York, pp. 154–1173.
- Johnson TC, Friend C. 1995. Assessing young children's sexual behaviours in the context of child sexual abuse evaluations. In T. Ney (Ed.), *True and False Allegation of Child Sexual Abuse: Assessment and Case Management*. Brunner Mazel: New York.
- Kendall-Tackett KE, Williams LM, Finkelhor D. 1993. The impact of sexual abuse on children: a review and synthesis of recent empirical studies. *Psychological Bulletin*, **113**, 164–180.
- Kievit Th, de Wit J, Tak JA. (eds) 1988. *Psychodiagnostiek voor de Hulpverlening aan Kinderen. (Psycho-diagnostics for Youth Care)*. Acco: Amersfoort.
- Klein M, Gordon S. 1991. Sex education. In C.E. Walker, and M.C. Roberts (Eds), *Handbook of Clinical Child Psychology*, rev. edn. Wiley: New York, pp. 933–949.
- Kreidler H, Kreidler S. 1966. Children's concepts of sexuality and birth. *Child Development*, **37**, 363–378.
- Lamers-Winkelmann F. 1992. Kinderen als informanten. (Children as informants). In H. Baartman, and A. Van Montfoort (eds), *Kindermishandeling: Resultaten van Multidisciplinair Onderzoek*. Bruna Uitgevers: Utrecht.
- Lamers-Winkelmann F. 1995. *Seksueel Misbruik van Jonge Kinderen*. (Sexual Abuse of Young Children). VU Uitgeverij: Amsterdam.
- Martinson FM. 1981. Eroticism in infancy and childhood. In L.L. Constantine and F.M. Martinson (Eds), *Children and Sex: New Findings, New Perspectives*. Little, Brown: Boston, pp. 23–35.
- Mian M, Marton P, LeBaron D. 1996. The effects of sexual abuse on 3 to 5 year old girls. *Child Abuse and Neglect*, **20**, 731–745.
- Moore JE, Kendall DG. 1971. Children's concepts of reproduction. *The Journal of Sex Research*, **7**, 42–61.
- Newson J, Newson E. 1968. *Four Years Old in an Urban Community*. Allen and Unwin: London.
- Oostveen JME, Meulmeester JF, Cohen-Kettenis PT. 1994. Seksueel gedrag van kleuters (Sexual behaviour of pre-schoolers). *Nederlands Tijdschrift voor Geneeskunde*, **138**, 2200–2204.
- Röling HQ. 1994. *Gevreesde Vragen: Geschiedenis van de Seksuele Opvoeding in Nederland. (Questions to Fear: The History of Sex Education in the Netherlands)*. Amsterdam University Press: Amsterdam.
- Spiecker B, Steutel J. 1997. Paedophilia, sexual desire and perversity. *Journal of Moral Education*, **26**, 331–342.
- Van der Berg P, Pennings A, Span P. 1985. *Het Gross Vormbord (The 'Gross Vormbord')*. Berkhout: Nijmegen.
- Van der Zanden R. 1992. Seksueel gedrag van kinderen: een literatuuroverzicht. (Sexual behaviour of children: a review). *Tijdschrift voor Ontwikkelingspsychologie*, **19**, 133–151.
- Volbert R. 1992. Statements about sexual abuse and sexual

knowledge of pre-school children. Paper presented at the Third European Conference on Psychology and Law, Oxford.

Volbert R, Homburg A. 1996. Was wissen zwei-bis sechsjährige kinder über sexualität? *Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie*, **28**, 210–227.